uCertify

Course Outline

CCNA Routing and Switching 200-125 uCertify Network Simulator

18 Apr 2024

1. Course Objective
2. Expert Instructor-Led Training
3. ADA Compliant & JAWS Compatible Platform
4. State of the Art Educator Tools
5. Award Winning Learning Platform (LMS)
6. Live labs

    Lab Tasks

    Here's what you get

1. Course Objective

Use the CCNA Routing and Switching 200-125 uCertify Network Simulator LiveLab to pass the Cisco CCNA ICND2 200-125 exam. The lab comes with a well-organized component library for every task. The lab provides knowledge of addressing and subnetting of IPv4 and IPv6, operating Cisco routers; enabling learning of IPv4 routes with OSPFv2, configuring and verifying host connectivity, subnetting design, VLSM, IPv4 Access Control Lists (ACL), and more.

2. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

3. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

4. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

5. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
    1. Best Postsecondary Learning Solution

- **2015**
    1. Best Education Solution
    2. Best Virtual Learning Solution
    3. Best Student Assessment Solution
    4. Best Postsecondary Learning Solution
    5. Best Career and Workforce Readiness Solution
    6. Best Instructional Solution in Other Curriculum Areas
    7. Best Corporate Learning/Workforce Development Solution

- **2016**
    1. Best Virtual Learning Solution
    2. Best Education Cloud-based Solution
    3. Best College and Career Readiness Solution
    4. Best Corporate / Workforce Learning Solution
    5. Best Postsecondary Learning Content Solution
    6. Best Postsecondary LMS or Learning Platform
    7. Best Learning Relationship Management Solution

- **2017**
    1. Best Overall Education Solution
    2. Best Student Assessment Solution
    3. Best Corporate/Workforce Learning Solution
    4. Best Higher Education LMS or Learning Platform

- **2018**
    1. Best Higher Education LMS or Learning Platform
    2. Best Instructional Solution in Other Curriculum Areas
    3. Best Learning Relationship Management Solution

- **2019**
    1. Best Virtual Learning Solution
    2. Best Content Authoring Development or Curation Solution
    3. Best Higher Education Learning Management Solution (LMS)

- **2020**
    1. Best College and Career Readiness Solution
    2. Best Cross-Curricular Solution
    3. Best Virtual Learning Solution

6. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

Lab Tasks

Chapter 6: Using the Command Line Interface

- Switch CLI Configuration Process I
- Switch CLI Configuration Process II
- Switch CLI Exec Mode
- Configuring Local Usernames
- Configuring Hostnames
- Testing Using Pings with Hostnames
- Using the debug Command on a Router
- Comparing Configuration Files

Chapter 7: Analyzing Ethernet LAN Switching

- Interface Status I
- Interface Status II
- Interface Status III
- Interface Status IV
- Switch Forwarding I
- Switch Interfaces and Forwarding

Chapter 8: Configuring Basic Switch Management

- Configuring IP Addresses I
- Setting Switch Passwords
- Terminal History I
- Terminal History II
- Configuring Switch IP Settings
- Switch IP Address
- Switch IP Connectivity I
- Switch IP Connectivity
- SSH and Telnet

Chapter 9: Configuring Switch Interfaces

- Interface Settings I
- Interface Settings II
- Interface Settings III
- Switch Security I
- Switch Security II
- Switch Security III
- Switch Security IV
- Switch Security
- Port Security

Chapter 11: Implementing Ethernet Virtual LANs

- VLANs I
- VLANs II
- VLANs III
- VLAN Configuration I
- VLAN Configuration II
- VLAN Configuration III
- VLAN Configuration IV
- Trunking Configuration I
- Trunking Configuration II
- Trunking Configuration III
- Trunking Configuration IV
- Configuring VLANs
- VLAN Trunking I
- VLAN Trunking II

Chapter 12: Troubleshooting Ethernet LANs

- Topology Analysis
- Path Analysis I
- Switch Forwarding Troubleshooting
- VLAN Troubleshooting

Chapter 16: Analysing Existing Subnets

- Subnet ID Calculation I
- Subnet ID Calculation II
- Subnet ID Calculation III
- Subnet ID Calculation IV
- Subnet ID Calculation V
- Subnet ID Calculation VI
- Subnet ID Calculation VII
- Subnet ID Calculation VIII
- Subnet ID Calculation IX
- Subnet ID Calculation X
- Subnet ID Calculation XI
- IP Address Rejection I
- IP Address Rejection II
- IP Address Rejection III
- IP Address Rejection IV
- IP Address Rejection V
- IP Address Rejection VI
- IP Address Rejection VII
- IP Address Rejection VIII
- IP Address Rejection IX
- IP Address Rejection X
- IP Address Rejection XI

Chapter 17: Operating Cisco Routers

- Loopback Interfaces
- Router CLI Exec Mode I
- Router CLI Exec Mode II
- Router CLI Configuration Process
- Configuring SSH
- Setting Router Passwords
- Interface Status V
- Interface Status VI
- IP Addressing and Configuration I

- IP Addressing and Configuration II
- New Job I
- Rebuild a Configuration

Chapter 18: Configuring IPv4 Addresses and Static Routes

- Configuring Router IP Settings
- Configuring IP Addresses II
- Configuring IP Addresses III
- Configuring IP Addresses IV
- IP Addressing I
- IP Addressing II
- IP Addressing III
- Connected Routes
- Static Routes I
- Static Routes II
- Static Routes III
- Static Routes IV
- Default Route I
- Default Route II
- Router on a Stick Configuration I
- Router on a Stick Configuration II
- Router on a Stick Verification I
- Router on a Stick Verification II
- VLAN Configuration V
- IP and MAC Address Comparisons
- Static Routing I
- Static Routing II
- Configuring Default Routes

Chapter 19: Learning IPv4 Routes with RIPv2

- RIPv2 Configuration I
- RIPv2 Configuration II
- RIPv2 Configuration III
- RIPv2 Configuration IV
- RIPv2 Configuration V

- RIPv2 Configuration VI
- RIPv2 Verification I
- RIPv2 Verification II
- IP Route Selection I
- IP Route Selection II
- IP Route Selection III
- IP Route Selection IV
- IP Route Selection V
- IP Route Selection VI
- IP Route Selection VII
- IP Route Selection VIII
- IP Route Selection IX
- IP Route Selection X
- IP VLSM Route Selection I
- IP VLSM Route Selection II
- IP VLSM Route Selection III
- IP VLSM Route Selection IV
- IP VLSM Route Selection V
- IP VLSM Route Selection VI
- IP VLSM Route Selection VII
- Configuring RIPv2 I
- Configuring RIPv2 II

Chapter 20: DHCP and IP Networking on Hosts

- Traceroute I
- Traceroute II
- PC IP Commands I
- PC IP Commands II
- PC IP Commands III
- DHCP Server Configuration I
- DHCP Server Configuration II
- DHCP Server Configuration III
- DHCP Server Configuration IV
- DHCP Server Configuration V
- Complete DHCP Server Configuration

- Path Analysis II
- IP Addressing and Routing
- DHCP Server Troubleshooting

Chapter 21: Subnet Design

- Subnet Zero I
- Subnet Zero II
- Zero Subnet
- Subnetting and Addressing I
- Subnetting and Addressing II
- Subnetting and Addressing III
- IPv4 Addressing Troubleshooting

Chapter 22: Variable-Length Subnet Masks

- VLSM Overlap I
- VLSM Overlap II
- VLSM Overlap III
- VLSM Overlap IV
- VLSM Overlap V
- VLSM Overlap VI
- VLSM Overlap VII
- VLSM Overlap VIII
- VLSM Overlap IX
- VLSM Overlap X
- VLSM Overlap XI

Chapter 23: IPv4 Troubleshooting Tools

- Ping
- Using and Suspending Telnet Connections
- Traceroute III

Chapter 25: Basic IPv4 Access Control Lists

- Standard ACL

Chapter 26: Advanced IPv4 Access Control Lists

- ACL I
- ACL II
- ACL III
- ACL IV
- ACL V
- ACL VI
- ACL Analysis I
- Named ACL I
- Named ACL II
- Named ACL III
- Extended ACL I
- Extended ACL II

Chapter 27: Network Address Translation

- NAT Configuration I
- NAT Configuration II
- NAT Configuration III
- NAT Configuration IV
- NAT Configuration V
- NAT Configuration VI
- NAT Configuration VII
- Configuring NAT I
- Configuring NAT II
- Configuring NAT III
- NAT Troubleshooting

Chapter 29: IPv6 Addressing and Subnetting

- IPv6 Subnet ID Calculation I
- IPv6 Subnet ID Calculation II
- IPv6 Subnet ID Calculation III
- IPv6 Subnet ID Calculation IV
- IPv6 Subnet ID Calculation V

- IPv6 Subnet ID Calculation VI
- IPv6 Subnet ID Calculation VII
- IPv6 Subnet ID Calculation VIII
- IPv6 Subnet ID Calculation IX
- IPv6 Subnet ID Calculation X
- IPv6 Route Selection I
- IPv6 Route Selection II
- IPv6 Route Selection III
- IPv6 Route Selection IV
- IPv6 Route Selection V
- IPv6 Route Selection VI
- IPv6 Route Selection VII
- IPv6 Route Selection VIII
- IPv6 Route Selection IX
- IPv6 Route Selection X

Chapter 30: Implementing IPv6 Addressing on Routers

- Configuring IPv6 Addresses I
- Configuring IPv6 Addresses II
- Configuring IPv6 Addresses III
- IPv6 Address Configuration I
- IPv6 Address Configuration II
- IPv6 Address Configuration III
- IPv6 Address Configuration IV
- IPv6 EUI-64 Calculation Drills I
- IPv6 EUI-64 Calculation Drills II
- IPv6 EUI-64 Calculation Drills III
- IPv6 EUI-64 Calculation Drills IV
- IPv6 EUI-64 Calculation Drills V
- IPv6 EUI-64 Calculation Drills VI
- IPv6 EUI-64 Calculation Drills VII
- IPv6 EUI-64 Calculation Drills VIII
- IPv6 EUI-64 Calculation Drills IX
- IPv6 EUI-64 Calculation Drills X
- IPv6 Configuration I

- IPv6 Configuration II
- IPv6 Addressing Troubleshooting

Chapter 33: Device Management Protocols

- Terminal Monitor
- CDP I
- CDP II
- LLDP I
- LLDP II
- Syslog Configuration I
- Syslog Configuration II
- Syslog Configuration III
- NTP Configuration I
- NTP Configuration II
- NTP Configuration III
- Network Discovery I
- Network Discovery II

Chapter 35: Managing IOS Files

- Booting a New Router IOS
- Setting the Configuration Register
- Ignoring the Startup-config File
- Migrating to a New IOS Image
- IOS Verification
- Password Recovery

Chapter 36: IOS Licensing

- IOS License Installation
- IOS License Removal
- IOS License Verification
- IOS License Installation and Migration

Chapter 3: Spanning Tree Protocol Implementation

- STP Configuration I
- STP Configuration II
- STP Configuration III
- Static EtherChannel
- Dynamic EtherChannel I
- Dynamic EtherChannel II
- Dynamic EtherChannel III
- Dynamic EtherChannel IV
- Portfast Configuration I
- Portfast Configuration II
- BPDU Guard Configuration I
- BPDU Guard Configuration II
- STP Analysis
- STP Configuration
- STP Prediction Drills I
- STP Prediction Drills II
- STP Prediction Drills III
- STP Prediction Drills IV
- Path Analysis III
- STP Feature Troubleshooting

Chapter 4: LAN Troubleshooting

- Path Troubleshooting I
- STP Troubleshooting

Chapter 5: VLAN Trunking Protocol

- VTP Configuration I
- VTP Configuration II
- VTP Configuration III
- VTP Configuration IV
- VTP Configuration V
- VTP I
- VTP Transparent Mode

Chapter 8:Implementing OSPF for IPv4

- Interpreting the show ip route output
- OSPF Serial Configuration I
- OSPF Serial Configuration II
- OSPF Serial Configuration III
- OSPF Serial Configuration IV
- OSPF Serial Configuration V
- OSPF Serial Configuration VI
- OSPF Router ID I
- OSPF Router ID II
- OSPF Metric Tuning I
- OSPF Metric Tuning II
- OSPF Metric Tuning III
- OSPF Neighbors I
- OSPF Neighbors II
- OSPF Neighbors III
- OSPF Neighbors IV
- OSPF Neighbors V
- OSPF Interface Configuration I
- OSPF Interface Configuration II
- OSPF Configuration I
- OSPF Configuration II
- OSPF Configuration III
- OSPF Metric Manipulation

Chapter 10: Implementing EIGRP for IPv4

- EIGRP Serial Configuration I
- EIGRP Serial Configuration II
- EIGRP Serial Configuration III
- EIGRP Serial Configuration IV
- EIGRP Serial Configuration V
- EIGRP Serial Configuration VI
- EIGRP Route Tuning I
- EIGRP Route Tuning II

- EIGRP Route Tuning III
- EIGRP Route Tuning IV
- EIGRP Neighbors I
- EIGRP Neighbors II
- EIGRP Neighbors III
- EIGRP Auto-summary
- EIGRP Configuration I
- EIGRP Configuration II
- EIGRP Metric Manipulation
- EIGRP Variance and Maximum Paths

Chapter 11: Troubleshooting IPv4 Routing Protocols

- Path Analysis IV
- EIGRP Troubleshooting
- IP Routing
- OSPF Troubleshooting I
- OSPF Multiarea Troubleshooting

Chapter 12: Implementing External BGP

- eBGP Peering I
- eBGP Peering II
- eBGP Network Configuration I
- eBGP Network Configuration II

Chapter 13: Implementing Point-to-Point WANs

- Serial Link Configuration I
- Serial Link Configuration II
- Serial Link Configuration III
- Serial Link Configuration IV
- Serial Configuration I
- Serial Configuration II
- Serial Authentication I
- Serial Authentication II
- Serial Link Configuration

Chapter 15: Private WANs with Internet VPN

- GRE Tunnel Configuration I
- GRE Tunnel Configuration II
- GRE Tunnel Configuration III
- GRE Tunnel Configuration IV
- GRE Tunnel Troubleshooting

Chapter 19: IPv4 Routing in the LAN

- MLS Configuration I
- MLS Configuration II
- MLS Configuration III
- MLS IPv6 Configuration I
- MLS IPv6 Configuration II
- Router-on-a-Stick to MLS I
- Router-on-a-Stick to MLS II
- MLS Troubleshooting
- Router-on-a-Stick Troubleshooting

Chapter 20: Implementing HSRP for First-Hop Routing

- HSRP Configuration I
- HSRP Configuration II
- HSRP Configuration III
- HSRP Configuration IV
- HSRP Configuration

Chapter 21: Troubleshooting IPv4 Routing

- Path Troubleshooting III

Chapter 22: IPv6 Routing Operation and Troubleshooting

- IPv6 Address Configuration V
- IPv6 Address Configuration VI
- IPv6 Address Configuration VII

- IPv6 Address Configuration VIII
- IPv6 Address Configuration IX
- IPv6 Routing

Chapter 23: Implementing OSPF for IPv6

- IPv6 Routing Configuration I
- IPv6 Routing Configuration II
- IPv6 Routing Configuration III
- OSPF for IPv6 Serial Configuration I
- OSPF for IPv6 Serial Configuration II
- OSPF for IPv6 Serial Configuration III
- OSPF for IPv6 Serial Configuration IV
- OSPF for IPv6 Serial Configuration V
- OSPF for IPv6 Serial Configuration VI
- OSPF for IPv6 Router ID I
- OSPF for IPv6 Router ID II
- OSPF for IPv6 Metric Tuning I
- OSPF for IPv6 Metric Tuning II
- OSPF for IPv6 Metric Tuning III
- OSPF for IPv6 Neighbors I
- OSPF for IPv6 Neighbors II
- OSPF for IPv6 Neighbors III
- OSPF for IPv6 Neighbors IV
- OSPF for IPv6 Neighbors V
- OSPF for IPv6 Neighbors VI
- OSPF for IPv6 Neighbors VII
- OSPF for IPv6 Neighbors VIII
- OSPF for IPv6 Troubleshooting I
- OSPF for IPv6 Troubleshooting II

Chapter 24: Implementing EIGRP for IPv6

- EIGRP for IPv6 Serial Configuration I
- EIGRP for IPv6 Serial Configuration II
- EIGRP for IPv6 Serial Configuration III
- EIGRP for IPv6 Serial Configuration VI

- EIGRP for IPv6 Route Tuning I
- EIGRP for IPv6 Route Tuning II
- EIGRP for IPv6 Route Tuning III
- EIGRP for IPv6 Route Tuning IV
- EIGRP for IPv6 Neighbors I
- EIGRP for IPv6 Neighbors II
- EIGRP for IPv6 Configuration
- EIGRP for IPv6 Metric Manipulation
- EIGRP for IPv6 Troubleshooting

Chapter 25: IPv6 Access Control Lists

- IPv6 ACL I
- IPv6 ACL II
- IPv6 ACL III
- IPv6 ACL IV
- IPv6 ACL V
- IPv6 ACL VI
- IPv6 ACL Analysis I
- Advanced IPv6 ACL I
- Advanced IPv6 ACL II

Chapter 26: Network Management

- SNMP Configuration I
- SNMP Configuration II
- SNMP Configuration III
- IP SLA Configuration I
- IP SLA Configuration II
- SPAN Configuration I
- SPAN Configuration II

Navigation and Administration

- Basic Commands and the Command Line
- Syslog: Assessment
- Password Recovery: Assessment

- CDP/LLDP Configuration and Discovery: Assessment
- NTP Configuration: Assessment
- RIPv2 Configuration: Assessment

IP Addressing

- Subnet Challenge
- IPv6 Address Configuration
- NAT/PAT Configuration
- DHCP Server Configuration
- ICND1 IP Addressing Final Exam

Switching

- Switch Configuration
- Basic Switch Configuration and the Command Line Interface
- Static VLAN Configuration and Trunking
- Trunking Configuration
- Switch Port Security
- ICND1 Switching Final Exam

Routing and WANs

- Basic Router Configuration and the Command Line Interface
- Configuring Static routes
- Access Lists
- Router On a Stick
- ICND1 Security Final Exam
- ICND1 Routing Final Exam

Subnetting

- IP Addressing and Subnetting
- Route Selection
- VLSM Overlap
- IPv6 EUI-64 Calculation
- VLSM Route Selection: Assessment

Troubleshooting

- Troubleshooting I
- Troubleshooting II
- IPv6 Address Troubleshooting: Assessment

LAN Switching

- VLAN Configuration: Assessment
- STP Configuration: Assessment
- STP Prediction: Assessment
- STP Features Configuration: Assessment
- Virtual Trunking Protocol (VTP) Configuration: Assessment
- EtherChannel: Assessment
- Multiprotocol Switching (MLS) Configuration: Assessment
- ICND2 Switching Final Exam: Assessment

WAN

- Serial Link Configuration: Assessment

Routing

- Routing OSPF: Assessment
- Routing OSPF, Load Balancing, and Metric Manipulation: Assessment
- IPv6 Routing - OSPF for IPv6: Assessment
- Routing EIGRP, Load Balancing, and Metric Manipulation: Assessment
- IPv6 Routing - EIGRP: Assessment
- External Border Gateway Protocol (eBGP) Configuration: Assessment
- ICND2 Routing Final Exam: Assessment

Services

- IPv6 Access List Configuration: Assessment
- HSRP Configuration: Assessment
- Generic Routing Encapsulation (GRE) Configuration: Assessment
- SNMP Configuration: Assessment

- IP Service Level Agreement Configuration: Assessment

Troubleshooting

- Troubleshooting VLANs: Assessment
- STP Troubleshooting: Assessment
- Troubleshooting Path Analysis: Assessment
- Troubleshooting OSPF: Assessment
- Troubleshooting EIGRP: Assessment

Here's what you get

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LIVE LABS

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